Macpherson & Hovey Co.



Monarch

Threshing Machinery.

Clinton, Ont.

London Ptg. & Litho. Co.

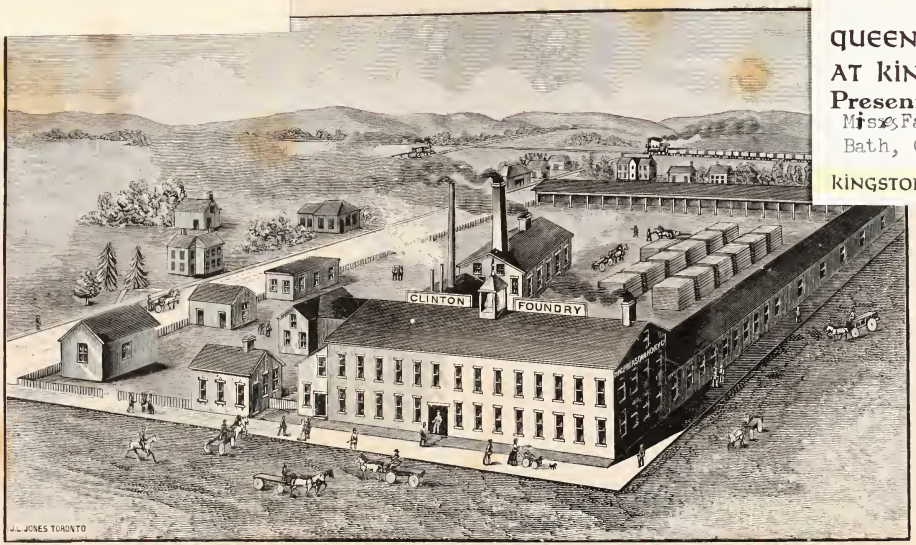
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WORKS OF MACPHERSON & HOVEY CO., CLINTON, ONT.

Established 1862. . . . 1895 . . . Thirty-fourth Year.

Illustrated Catalogue Descriptive

OF

Threshing Machines for
Steam and Horse Power,
Pitts Improved Horse Powers,
Agricultural Steam Engines.

Barley Bearding Attachments,
Clover Hulling Attachments,
Pea Threshing Attachments,
Baggers, Talliers, Etc.

MANUFACTURED BY

MACPHERSON & HOVEY CO.

CLINTON, - - ONTARIO.



The Best Model.

The Best Material.

The Best Workmanship.

The Best Finish.

ADVERTISER PRINTING COMPANY,
LONDON, CANADA.

A THIRD OF A CENTURY IN THE THRESHING MACHINE BUSINESS.

TO OUR FRIENDS AND THE PUBLIC:

WE HEREWITH present you with our Illustrated and Descriptive Catalogue for 1895—the thirty-fourth year of our business—and in doing so, feel that we can refer with much pride to the long period during which we have continuously made a SPECIALTY *of manufacturing threshing machinery, keeping constantly to the front with improvements from year to year, and being always awake to the fact that* THE GREATEST ECONOMY AND EFFICIENCY MUST BE OBTAINED.

The present organization and management is a continuation of the business commenced in 1862, and all connected with it have had unusual experience in the manufacture and operation of the kind of machinery we make.

The principal illustrations in this catalogue being direct reproductions of photographs of our machines, customers can see just what they will get when they order of us. They show, better than any description, the character and styles of Threshing Machines and Engines we are offering this season.

We offer intending purchasers only the most thoroughly tested articles, of established reputation. Our machines are a development—not an experiment—and we feel the utmost confidence in being able to satisfy any and all who purchase of us, as far as the quality of our machinery is, in every respect, concerned.

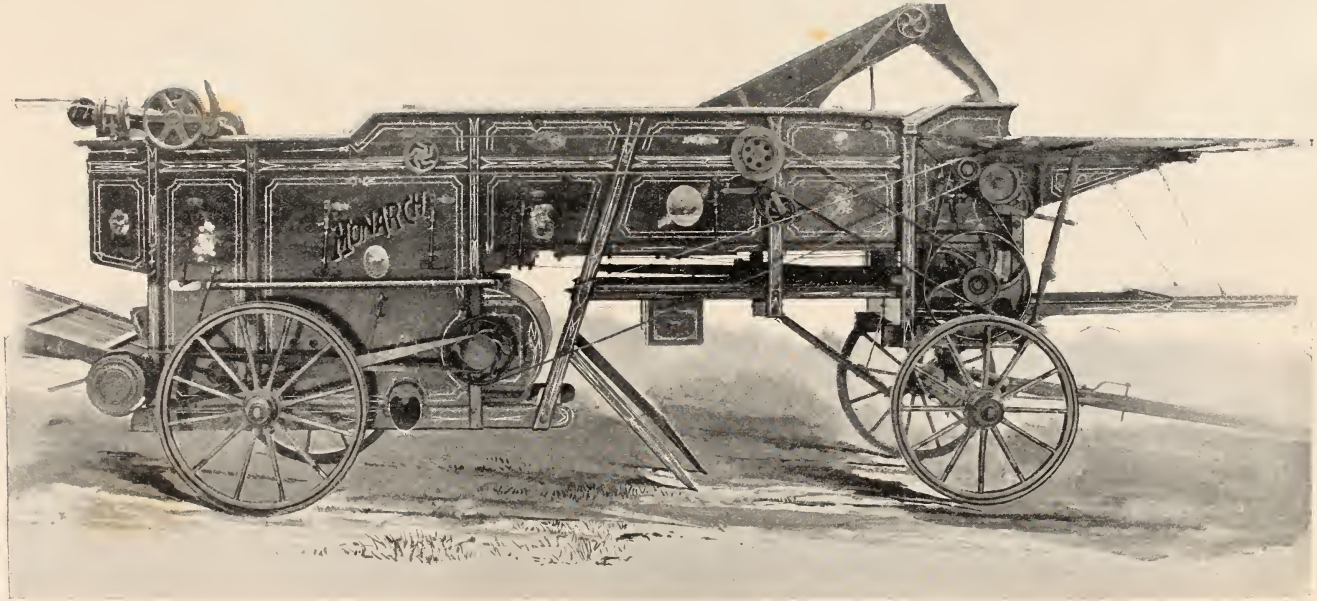
Our facilities for manufacturing are of the best, consisting of abundant buildings and machinery, skilled and experienced workmen, and a large stock of material always on hand, so that we are prepared to supply a large demand.

We are situated very advantageously for shipping, Clinton being at the junction of two important divisions of the Grand Trunk Railway, running north, south, east and west, thus enabling us to forward to all points without transhipment, and on very favorable rates of freight.

During the past year we have devised numerous improvements, which we have fully tested before applying them to our machines. We have also added to our lines of machinery, in now building canvas apron separators of different sizes, as well as vibrating separators.

We respectfully solicit continued favors from former customers, and correspondence with all who are interested in machinery of the kinds we manufacture.

MACPHERSON & HOVEY CO.



MONARCH THRESHER. LEFT-HAND VIEW.
36-inch Cylinder. 52-inch Rear.

THE MONARCH SEPARATOR.

THE MONARCH, when first placed on the market by us in 1887, was represented as embodying points of excellence which would enable it to surpass all other machines. It has now experienced the test of eight threshing seasons; has threshed enormous quantities of all kinds and conditions of grain; has overcome difficulties which have ever been perplexing to the trade, and has delighted farmers and threshermen in all sections of the Dominion. In short, it has proved a decided success and fully verified our predictions and assertions. The fact that we are now in the ninth year of its manufacture is further and abundant assurance to intending purchasers that all the experimental stages in its construction have been passed, and that as now built by us it is in all respects perfected and complete. It threshes, separates and cleans the grain thoroughly—better, we believe, than any other machine made—and is strong, durable and convenient to operate. We believe that the principles contained in our MONARCH are more nearly perfect than any others that have yet been devised or employed, and that any that will be an improvement on them remain to be invented and tested. It is needless to say that since first brought out, the MONARCH has been in many ways greatly improved. Although those of earliest make gave the purchasers of them, in every instance, excellent satisfaction, and were pronounced superior to any others built previously or during the same years, still experience with it in the field suggested to the users and ourselves where it could, in different respects, be improved, strengthened and made more convenient, and without regard to expense, or increase in first cost, everything that would make the machine better in any way has been added We have endeavored to keep thoroughly posted as to the needs of threshermen, and are assured that we have continually furnished our patrons the best in the line. In addition to the many unsolicited testimonials given us by our customers, we have received scores of letters from farmers speaking in the highest terms of the superior work it has done for them, especially in the thorough separation of the grain from the straw, which is of **first** importance to them.

We now ask the careful attention of threshermen and farmers to the following description of the separating devices and other parts of the MONARCH, feeling certain that all will agree with us that it has the most effective appliances for thorough threshing and agitation of the straw of any machine ever offered to Canadian threshermen.

DESCRIPTION OF THE MONARCH.

THE MONARCH will be found upon examination to be in numerous respects unlike any other machine made. Its **distinguishing features,** in which it differs from all others, are :

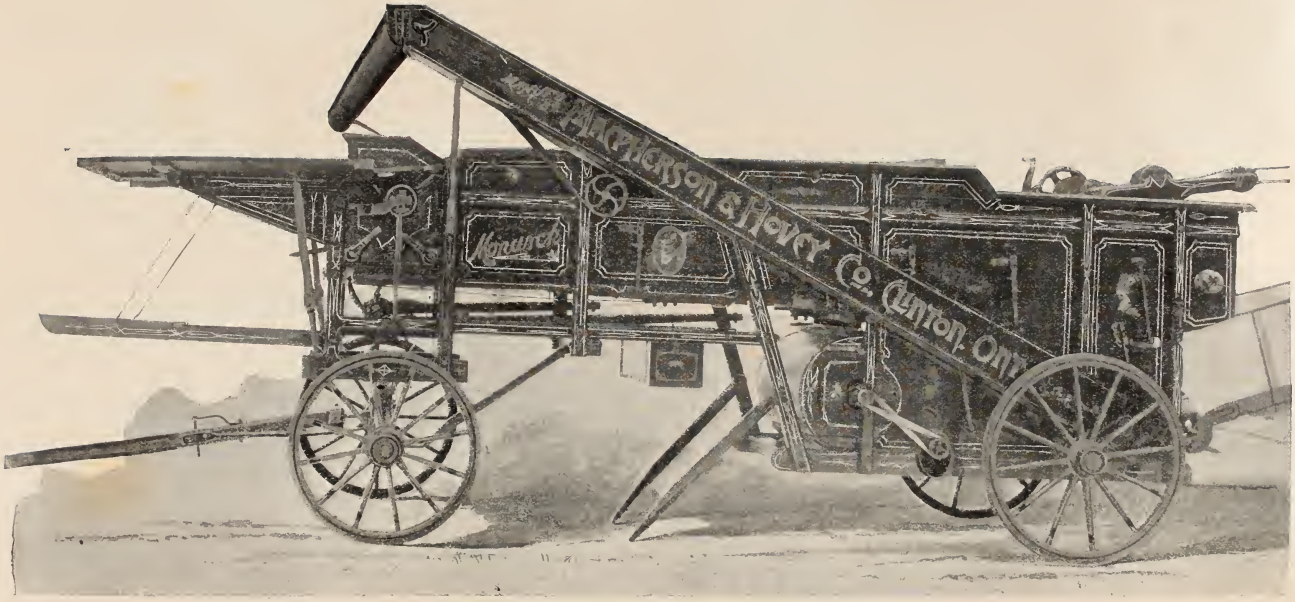
THERE ARE NO GRATES, BEATERS, ROLLERS, OR PICKERS of any kind in it, consequently there can be no clogging or winding of the straw.

THE STRAW AND GRAIN ARE CARRIED ON THE SAME DECK, thus dispensing with the lower agitating grain deck, or the stationary floor, with its attendant slat and strap rake, used in all other agitating machines. The saving in wearing parts, and the greater lessening in draft, together with the steadier running of the machine by this arrangement is at once apparent.

THE MONARCH IS THE ONLY MACHING BUILT THAT AGITATES ABOVE, BELOW AND THROUGH THE STRAW, THE ENTIRE LENGTH OF THE MACHINE, so that there is not an inch of the entire mass of straw but what is opened out so as to give ample opportunity for the grain to fall by its own weight into the bottom of the pans, by which it is conveyed to the shoe.

The Frame is made entirely of carefully selected and thoroughly weather-seasoned maple and second-growth ash, and is mortised and bolted together in the most secure manner. This is in strong contrast to the frames of some machines, in which for cheapness the posts and girts are fastened together simply by joint bolts. The framing is further arranged and distributed in such a way as to resist to the best possible advantage the varying strains to which the different parts of it are subjected, and the racking incident to moving over rough and uneven roads.

The Sills, which it will be noticed are large and strong, to enable them to sustain their large share of strains and load, are made in two sections, and a slanting post is placed between the two parts in such a manner as to form a truss, thus giving greater strength and rigidity to the frame than if the sills extended in single pieces the whole length of the machine, and preventing all possibility of sagging They also enable the forward truck wheels to be cramped short under the separator, and thus allow of the machine being turned around almost within its own length—a feature which every thresherman will greatly appreciate.



MONARCH THRESHER. RIGHT-HAND VIEW.

36-inch Cylinder. 32-inch Rear.

The Top of the machine is well decked over, and the decking is provided with several hinged doors, admitting of convenient access to the interior working parts of the machine.

THE CYLINDER

Is 36 inches in length, and is furnished with either 8 or 9 bars, as preferred.

The 8-bar Cylinder weighs 300 lbs. and contains 56 teeth.

The 9-bar Cylinder weighs 340 lbs. and contains 84 teeth.

The Cylinder Shaft is of the very best special steel, and **is turned its entire length.**

The Heads—four in number—are all keyed to shaft, which assists greatly in making a cylinder that is strong and unyielding, and in preventing the shaft from springing. The end heads are solid, and the two centre heads open, or spider pattern.

The Bars are 1 inch thick by 1½ inches wide. The holes in the bars **are bored** (not punched) **and tapered,** and also slotted in two places, which enables the tooth (already provided with a rib or feather, corresponding with the slots in the bar) to be so securely fastened that it cannot become loosened in use. The bars project over the end heads, and have teeth outside the heads, to prevent weeds or wet straw from collecting between the ends of the cylinder and side plates, which not only cause the machine to run hard, but, from the great friction, are a source of danger.

The Bands, which are very strong, are of ⅝ inch square wrought-iron, and special care is taken to perfectly weld them. These square bands will resist shocks much better than the thin flat bands used on all other cylinders and are less liable to breakage.

The Cylinder Teeth are made of a special grade of steel, combining with hardness, extra strength and toughness. Being forged in dies they are perfectly uniform in size and weight, which are necessary features for keeping the cylinder in balance.

They have **round, tapered shanks,** by means of which they can be drawn tightly into the bar. This feature of round, tapered shanks and corresponding tapered holes in the cylinder bars ensures the teeth **always** being held firmly in place, no matter how long the machine has been in use, or how often refitted with new teeth, and which, as all threshermen know, cannot be the case with teeth made to fit into square holes, especially after the machine has been for a time in use.

The shanks of the teeth are larger than usual, and have more threads to the inch than any other, thus holding the nut more securely.

They have no shoulders resting on the bars to cause easier breakage.

The Teeth are reversible, and when worn on one edge can be turned in the bar, thus securing nearly double the amount of wear.

There is **only one pattern of Tooth** for the whole cylinder, thus avoiding confusion in ordering new teeth, which threshermen will fully appreciate. This advantage cannot be claimed by any other makers.

The Boxes are set **on pivots** and **are adjustable to the shaft,** which prevents binding, and ensures the shaft running cool. They are deeply lined with a superior quality of babbit metal.

End Play is prevented by keeping the box at left hand end of cylinder snug between the end head on the inside and the pulley on the outside of it To prevent friction and ensure smooth running, the ends of cylinder box, pulley and hub of end head are turned true.

Adjustment of Cylinder.—The cylinder teeth are made to "track" in the centre again, between the concave teeth, after slack end play has been taken up, by means of an **Adjusting Arm with set screws,** whereby the cylinder is moved endwise until the teeth track properly. The Adjusting Arm is one of the best improvements and conveniences ever added to a cylinder, and is only to be found on our **Monarch** machine.

Cylinder Yoke and Outer Bearing.—Where a long and heavy belt is used, as in steam threshing, the cylinder boxes are subject to a severe strain. To reduce the wear and overcome vibration or springing of the shaft, an Outer Bearing with a third shaft box is used. The driving pulley is placed on the shaft between the two boxes; the wear and strain is thus distributed and liability of heating boxes is overcome.

The Driving Pulley is well leathered and "crowned" more than usual, thus causing the main drive belt to run steadier, preventing it from swaying from side to side, and entirely dispensing with the need of belt guides, usually consisting of wooden rollers revolving on upright iron spindles, which all threshermen know are a constant and serious source of injury to the edges of the drive belt. More belts are thus ruined than from all other causes combined. **Belt Guides are not used or needed on the Monarch.**

The Cylinder Side Plates are of solid cast iron, with flanges which are firmly bolted to the frame of the machine, forming stiff and rigid bearings for the cylinder boxes, unaffected by time or weather; thus the alignment



MONARCH SEPARATOR. FRONT VIEW.

Showing Cylinder, Iron Sides, Cylinder Adjusting Arm, Pivoted Bolster, Trussed Axle, etc.

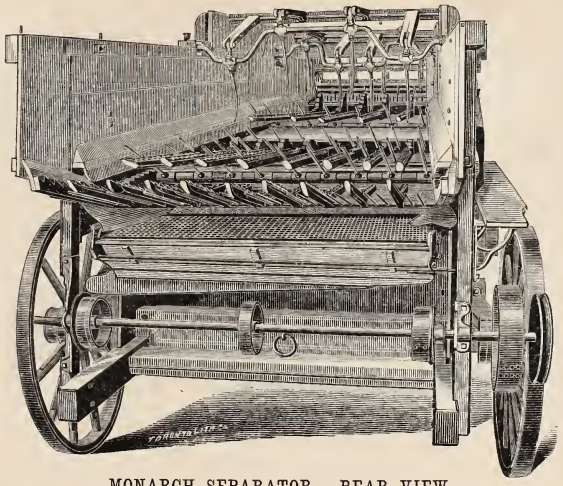
of the boxes is preserved, avoiding the trouble so often occasioned by warping or sagging when the boxes are fastened to wooden cross pieces or girts.

The wooden sides, lined with sheet iron, so generally used in other machines, and a further cause of trouble and expense to keep in order, **are not used in the Monarch.**

The Cylinder Cap has cast iron ends, and is attached to the top of the frame by wrought-iron hinges, thus allowing it to be turned back, whereby easy access is had to the cylinder for adjustment of the teeth and boxes.

Further Good Features.—The cylinder is of larger diameter than usual, being 16½ inches over bars, and 22 inches over teeth. After cylinder is completed and the pulleys fitted on, it is given a **perfect running balance** at full threshing speed. We do not depend simply on levels for balancing the cylinder, as is the case with some other manufacturers. Our cylinders are made throughout with such care that on being tested they are often found to be perfectly true, and do not require any further balancing. The cylinder teeth are set in such a manner that it is impossible for any grain to pass between them without being threshed from the head, and on account of the fewer number used we are enabled to space them wider apart,—the spaces being 4¼ inches in the 8-bar cylinder, and 3¼ inches in the 9 bar cylinder—which renders the machine very easy to feed, and at the same time the cylinder is not so easily checked, and it takes a great deal less power to operate the machine than it does where a greater number of teeth are used, besides making a great deal less chaff, which in turn makes easier separation, and less work for the mill, enabling the grain to be cleaned in the finest manner.

More could be said of the superior merits of our cylinder, but the foregoing description will, we believe, be sufficient to satisfy all that it is by far the best made. We have described it more fully than we otherwise would, for the reason that being so radically different from the cylinders used in other machines, it has for years past been more the subject of attack by our competitors than perhaps any other part of our machine. The best proof of its success is that other makers are adopting some of its principal features, and are now advertising as new improvements what we have made for years past.



MONARCH SEPARATOR. REAR VIEW.

With Covering and Curtains Removed to show Interior Working Parts.

THE CONCAVES

are made in four sections, each having one row of holes for teeth. There are alternately 13 and 14 teeth in each row, or 54 teeth in the four sections of concave.

One extra Concave with two rows of holes, containing in all 27 teeth, is also furnished **free** with each machine. It is intended to be used only when threshing the very smallest or toughest kinds of grain or seeds.

The Concaves are made extra heavy from end to end.

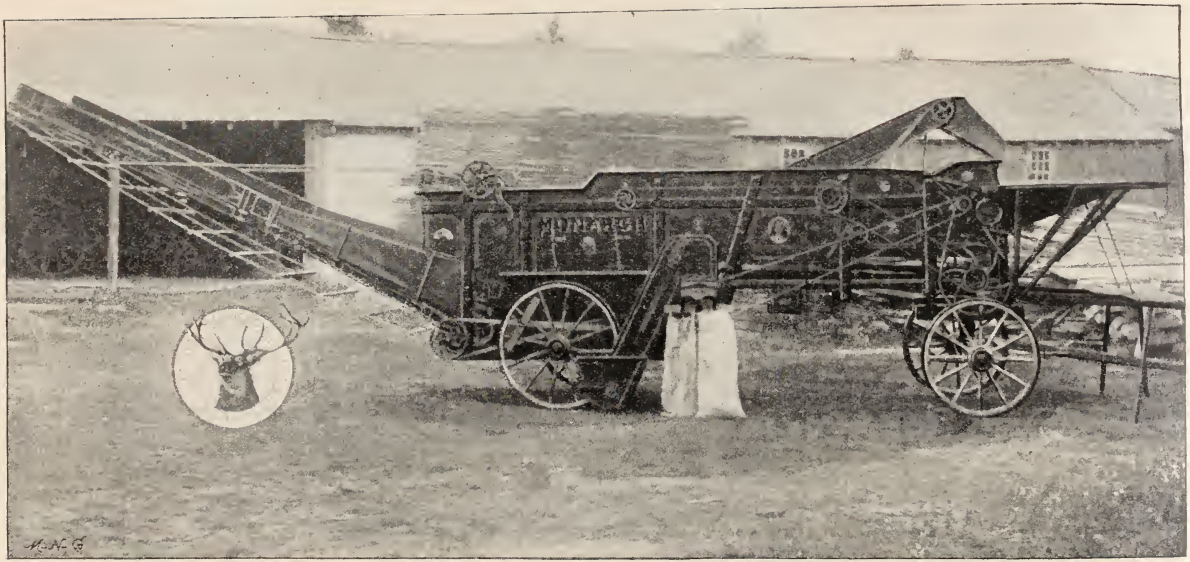
Every section is ribbed or grated, but the gratings can be closed when desired by bolting on plates of band iron, which are furnished with each concave.

The Concave Adjuster is on an entirely different plan from that used in other machines, and extremely convenient to operate.

It adjusts both back and front of concaves **independently.**

In addition to having the usual range of raising and lowering, it can, by means of an additional dog, be still further lowered, and the concaves let further down, for threshing peas or other tender grain without injury. This is another advantage not possessed by any other machine.

Iron Deflecting Curtain.—After the mingled straw and grain leave the threshing cylinder and concaves it comes in contact with an Iron Deflecting Curtain, placed immediately behind the cylinder, which directs it downward to the separating pan or deck. It consists of separate iron plates or



MONARCH SEPARATOR, with Combined Bagger and Tallier.

leaves, which act independently of each other. The leaves are strongly hinged to the iron plate which forms the upper part of the curtain, and the whole curtain can be raised or lowered by means of a strap and buckle.

This Deflector prevents shooting of the grain, and by its use agitation and separation of the grain and straw commence immediately back of the cylinder.

THE SEPARATING PARTS,

And Superior Method of Separation.

The Separating Parts consist of two decks made throughout in the strongest manner, yet light. The frames of the decks are made of selected white ash, securely fastened together with bolts, screws and wrought-iron corner straps, and braced beneath, both lengthwise and crosswise, with truss rods to prevent sagging.

The decks are constructed in such a manner that no litterings, chaff, straw or grain can escape over their sides.

The bottoms of the decks are of corrugated sheet-iron.

Their vibratory motion is obtained from a **solid steel forged double crank shaft,** to which is attached two pitmans (fitted with brass boxes) for driving each deck. Their motions are in opposite directions, thus counter-balancing each other, causing them to work lightly and smoothly, and without shaking the machine.

On the bottom of each of the pans, close to the front ends, are bolted wooden head blocks, covered with sheet-iron on the sides, and hoop iron on top, as a protection against wear. On the rear edges of the front deck blocks are notched steps, 7½ inches high, which form the incline down which the straw passes from the cylinder and deflecting curtain. To the head blocks in both decks are attached notched wooden strips 5 feet 6 inches long, which are set up 5 inches above the bottom of the decks at front ends, and slant upward as they extend toward the rear. These strips being attached at the front ends only, have a vibratory motion independently of the decks. Being fastened to the head blocks by means of a knuckle joint, they can be raised or lowered to retard or facilitate the passage of the straw. The notched strips are forced into the straw at every vibration of the pans, thus opening it out and allowing the grain to fall by its own weight into the bottom of the pans.

The decks are fitted with four sets of steel lifting fingers, which are attached to wrought-iron arms, by means of malleable iron collars having necks into which the fingers are threaded.

The Wrought Iron Arms, which extend through to the outside of the machine and then turn upward, **are by a convenient arrangement made adjustable,** to permit of the lifting fingers being raised or lowered.

The steel lifting fingers lift and toss the straw from underneath as it is worked along over them, in the same manner that it would be tossed and shaken up by hand.

The entire bottom of the rear deck is perforated, thus giving, as will be seen, abundant opportunity for all the grain that can be fed into the machine to fall through to the chaffer and shoe beneath, without any being carried over.

First Kicker.—Immediately back of the iron deflecting curtain is placed a Kicker, which consists of four malleable-iron forks, working on a double crank shaft made of steel. The upper ends of the forks are connected to wooden arms pivoted at one end, and are thereby given an oval or elliptical motion, by which the straw is tossed upward as well as backward. As the forks are placed so near to the deflecting curtain that they work between the leaves, they prevent any tendency of the straw to collect or wind on the cylinder. The boxes on the forks are in two parts, and lined with a superior quality of babbit metal, and the oil cups have tight fitting covers for keeping dust out of the boxes.

Hinged Wooden Curtain.—Back of the first kicker is placed a **Curtain** consisting of wooden slats hung on a rod, the rod passing through the slats a little above their centre, and supported by iron braces to prevent sagging. Being hung in this manner they rise very easily to allow the straw to pass under them, at the same time assisting to prevent grain from flying backwards.

Second Kicker.—Just past the junction of the two decks, and in rear of the wooden curtain, is a **Second Kicker,** same as the first one back of the cylinder, and the same description applies to it, as it is made equally strong and durable. These Kickers prevent straw from passing out through the machine in bunches, and by keeping it thoroughly picked up, and constantly in motion, it is almost impossible to get any grain through the machine in the straw. They constitute one of the best features of our MONARCH machine, and will more thoroughly accomplish the work for which they are intended, than beaters, pickers, or any other devices in use. To their effective work is largely due the reputation our MONARCH has won of being the most thorough separator built.

The Kickers throughout are made in the most durable and substantial manner, and can be used for years without requiring any repairs.

Behind the Second Kicker is hung a canvas apron, which is intended to further prevent the shooting of any grain through the machine that may fly past the first curtain.



MONARCH SEPARATOR, WITH BARLEY BEARDER.

Perforated Distributor.—Underneath the rear deck, and attached to it, is a **Perforated Sheet-Iron Distributor, or Chaffer,** peculiar to this machine. It allows the grain to pass through it to the riddles, but prevents the coarse chaff, heads and short straws from doing so. By means of it, the riddles proper have only the bare cleaning to perform, and are thus enabled to do an unusually large amount of it, without liability of clogging.

It will thus be seen that the MONARCH is fitted with more complete appliances for separating the grain from the straw than any other; that the process of separation is **begun immediately** upon the escape of the material from the cylinder, and is most **thoroughly** and **persistently kept up** until the work is fully and perfectly completed, and with a degree of efficiency not approached in any other machine.

THE SHOE.

Thorough Cleaning of Grain and Seeds.

For some years the MONARCH has been fitted with an **End-Shake Shoe,** which has proved to be one of the most important improvements added to it. Owing to the extra width of machine at rear end, space is given for an extra wide shoe, which being also of extra length, gives considerably greater cleaning capacity than other mills have. It is capable of handling and cleaning the largest amount of grain or seed with entire ease. The sieves have over 17 square feet of cleaning surface. The shoe has a short and rapid vibrating movement, and is driven by two steel pitmans attached to eccentrics on the fan shaft. This movement has been adopted by different leading manufacturers both in Canada and the United States, and is considered the most suitable for rapid and effective work of any shake that can be used. The blast is "undershot," which will more effectually prevent the sieves from clogging, than the "over-blast" used in other machines. The shoe is hung on four steel springs, which are made adjustable as to length, and allow it to operate in the smoothest and lightest manner possible. Notice also that the springs have no wearing parts, as is the case with "hangers" and other contrivances used in connection with the shoes of some other machines. A wind board is provided, enabling the blast to be directed to any part of the sieves desired. Unless otherwise ordered we furnish three wire sieves, which kind we consider the most effective, especially in thistly grain, but sheet-iron lip sieves can be furnished instead to those who prefer them. A Seed Screen can also be fitted in the shoe, if required, and will in all cases be rnished free, if asked for at the time of ordering machine. The shoe is not tached to the decks, or any other part of the machine, and is therefore thoroughly and independently adjustable; it is also driven by an **independent** belt from the cylinder shaft. It is never heavily loaded, owing to the Perforated Distributor over it carrying out a good portion of the chaff and short straws, which thus do not fall on the sieves. The front part of the Fan Drum can be entirely taken out of the machine by simply removing four small bolts, thus giving full access to the fan shaft, crosses, wings, and eccentric boxes, for any necessary adjustment, or repair. This is another great convenience peculiar alone to the MONARCH. The foregoing description must be convincing as to the shoe of the MONARCH being in many respects a superior one. In operation it requires the least possible attention, and gives perfect satisfaction.

THE ELEVATOR.

We use a long elevator, with stationary spout, which discharges directly into the cylinder. The inside of the elevator is made deep and wide, and is free from obstructions. The elevator straps are of best quality, extra heavy rubber belting, to which hardwood blocks are attached, and which draw up the chaff and tailings on the bottom of the case. The inside pulleys, over which the straps run, are flanged, to ensure the straps running true, and prevent friction and wear against the sides of the case. The elevator will not clog in the fastest threshing, and is not liable to get out of order.

THE STRAW STACKERS

In a great many machines are sources of much annoyance, from either flimsy or unwieldly construction. The hinges used are also generally too light and defective in construction, and these faults, especially when combined with heavy, clumsy stackers, are the cause of a large share of breakages which occur. The Stacker used on the MONARCH is free from these defects, being light, and convenient to raise and lower, while being very strong and substantial, and is fitted with heavy cast hinges, which are not liable to break, and, in fact, are seldom broken.

It is made in three sections and of a total length of nearly 23 feet.

The floor of **each section** is protected **at each end** with cross strips, to prevent their being splintered and broken.

It is provided with deep canvas side curtains.

The stacker belt has **three** straps, of best quality, 3-ply rubber, which run in grooves in floor of Stacker, thus saving wear on them, and are **attached to the slats with flat-headed bolts.** It is also made in two unequal lengths, to be used with either two sections, or the full length of the Stacker, as desired.

A convenient door for saving chaff is fitted in lower section.

The driving pulleys are leather covered, ensuring strong grip on the belts.

The Stacker Driving Belt is wider than is used on any other machine, and runs over large pulleys.

When on the road, the two upper sections are folded over the top of the machine, and rest on a cross girt, provided with pins to hold them securely, which prevents any injury or chafing to the decking. In this position they do not cause any undue weight or strain on the rear end of the separator frame, as is the case with stackers which entirely fold up behind the machine. In every respect it is the most substantial and convenient Stacker ever attached to a threshing machine.

The Stacker Windlass is furnished with spur wheel and pinion, by which much less strength is required for raising or lowering the Stacker.

By means of rollers projecting over rear end of machine, the Stacker is quickly and conveniently raised and folded over top of machine. The windlass fixtures throughout are made in the most substantial manner, and are in strong contrast to the unhandy and hard working fixtures to be found on other machines.

Improved Side Delivery.—Our arrangement for delivering the straw sidewise into the mow is superior to, and has advantages over, any other in use. The Chain Driving Pulley is placed on the lower Stacker shaft. Directly above it, twin pulleys for making the angle in the chain are located on the deck or cover of machine at rear end, in such position as to line with the chain pulley at upper end of Stacker. They are so arranged as to work equally well, and without any trouble to shift, when the Stacker is set for delivering the straw on either side of the machine. The twin pulleys can also be adjusted to line with upper chain pulley, even when Stacker is set at more or less than a right angle to the machine. By the use of a curtain, hung between the Shoe and Stacker, the chaff when desired can be saved separately, while the straw is being discharged sideways into the mow. As, however, in the great majority of cases, the chaff is mingled with the straw, when stored in the mow, notice particularly that our MONARCH is the only machine made in which this can be done, without requiring additional help to do this most disagreeable part of the work. In all other machines, which discharge the straw some distance beyond the shoe, an extra man is required to fork the chaff on the Stacker.

FOLDING FEED TABLES.

The success of our Folding Feed Tables is assured. Valuable time is consumed in taking off and putting on the old style tables when moving from place to place. This we entirely do away with. Each table is made in two parts and hinged so that it folds towards the centre, leaving the tables no wider than the other parts of the thresher.

The inner leaf is firmly supported by braces, and when in use the outer leaf is supported by sliding braces attached to lower side of inner leaf.

An additional small leaf is attached to the end of each table for covering the cylinder pulleys and belts and preventing the straw from interfering or causing trouble with their working. The illustrations on pages 4 and 6 fully explain the construction of these tables, and as now made with latest improvements.

TRUCKS.

The hubs, spokes and rims are all made of best selected and thoroughly seasoned white oak. **We use no cast iron hubs.**

The rims and tires are of extra width, and the tires are shrunk on the rims in an improved manner, whereby they are not so liable to become loose, and are also bolted to them.

The axles are fitted with best pattern of patent arms.

The front axle is trussed with a continuous iron rod, running around front and back of axle, and wedges are provided for tightening the truss whenever required.

A pivot bolt in front axle allows the wheels to move over ruts or knolls without straining or twisting frame of separator.

For further particulars of the manner in which our trucks are made, see cuts. A comparison of them with the trucks furnished with other makers' machines will satisfy all that our trucks are the most substantial and convenient made.

CHAIN-DRIVE MACHINES.

Last year we dispensed with Leather Belts for driving the First and Second Kicker and Tailings Conveyor shafts, and used malleable link chain belting instead. It proved a perfect success, and will be found on all our Threshers made this year, unless otherwise ordered. The advantages of chain belts for driving these parts of the machine are that the motion is steadier, and the trouble and delay caused by leather belts slipping or being thrown off is entirely dispensed with. The delivery of the tailings, in all conditions, as well as the more uniform working of the kicker forks, and elevator (driven from the first kicker shaft) is, by the use of chain belts, assured.

RECENT IMPROVEMENTS.

Some of the improvements and conveniences recently added to our MONARCH are mentioned below, and very materially enhance the value of the machine.

The Cylinder Boxes are made larger, to admit of thicker lining of babbit metal.

The Brass Pitman Boxes are made heavier, and the front halves of the boxes now have square ends, instead of round as formerly, permitting of easier adjustment and better fitting in the pitman straps.

The Pitman Straps.—Instead of the malleable-iron pitman straps with closed ends, formerly used, we now fit the pitmans with wrought iron straps made in separate parts, with open ends, which are connected by cast plates. By means of these the pitman boxes can at any time be much more readily removed, and without requiring to take off the pitman straps also.

The Crank Shaft for driving the decks is now made of **solid forged steel,** instead of malleable-iron as formerly, and of larger size than first used.

The Crank Shaft Boxes are made wider than heretofore.

Brass Oil Cups, with screw covers which cannot work loose, or be lost off, are now fitted on the pitman straps, instead of the cast iron covers formerly used. By slightly unscrewing the cover, oil is admitted through a small hole in it into the cup, and when screwed up again, the cover is tightly closed, preventing dust from getting into the cup and boxes.

The Feed Table Supports are reduced in number by one half, sliding braces beneath the tables being now used instead of the extra supports formerly employed. The supports are also securely fastened to the tables by hook bolts, and cannot be lost while moving over the roads.

The Crank Shafts for driving the Kicker Forks are now of steel, and larger in diameter. Their increased size will enable the heaviest threshing to be done without any possibility of springing them.

The Kicker Forks have been correspondingly enlarged and strengthened, and the oil cups on them also provided with close fitting spring covers, which thoroughly exclude dust from the bearings of the crank shafts.

Rear Deck.—The separating capacity of the rear deck has been increased by now using slats for about 18 inches of its length, near the centre of the deck, instead of perforated sheet-iron as heretofore.

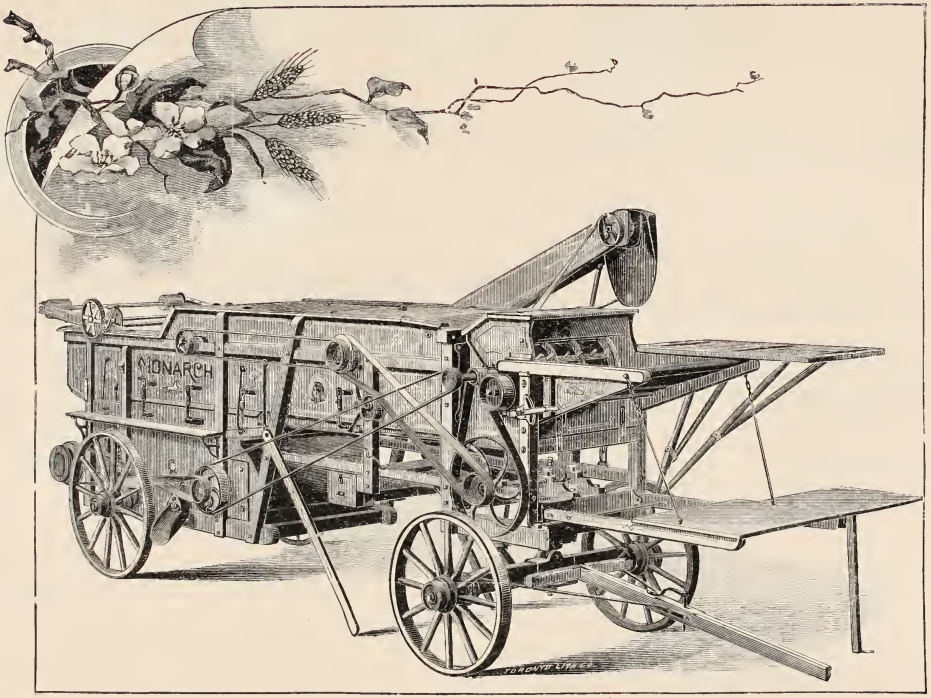
The Fan Shaft has been increased in size, and is now also made of steel. It is fitted with crosses of improved pattern.

The Grain and Tailings Conveyor Shafts have been enlarged, and **are now fitted with interlocking flights,** or sections, which cannot by any possibility turn around on the shafts, or get out of place. They are securely held together by end collars with set screws. These are in strong contrast to the wooden conveyor shafts with the sections fastened on with screws, to be found in some other machines.

Improved Sieve Holders have been fitted in the shoe, which are adjustable, and provide for the sieves being securely clamped in position, preventing any loose play while in motion, and consequent wear of the sieve frames and sides of shoe.

The Straw Carrier Hinges are of new pattern, made reversible, and much stronger than those previously used.

The Belts and Pulleys have in different instances been increased in width, to give ample bearing service and "grip" for the heaviest work, without strain on the belts, journals or boxes, and no other machine can compare with the MONARCH for excellent manner of belting, a feature which will be much appreciated by experienced threshermen.



MONARCH SEPARATOR.

Summary of Special Points of Excellence of the Monarch.

WHEREIN IT SURPASSES ALL OTHERS.

Further Good Features and Improvements not Described in the Foregoing Pages.

Cylinder provided with heavy bars, whereby more weight than usual is put on its circumference, thus having it act as a balance wheel, and preventing checking; they also hold the teeth much more firmly.

Cylinder Cap so arranged that dust is not thrown in the face of the feeder.

Feed Board fitted on lower edge with wide band-iron plate **bolted on;** cannot wear out. Contrast this with the sheet-iron covering used on the feed boards of other machines.

Foot Board, where attached to separator, made adjustable, and can be raised or lowered to suit the height of feeder.

Band Cutter's Foot Board arranged to be fastened either to side of Feeder's Foot Board, or over top of front truck wheel, whereby the band cutter can either stand beside, or face the feeder.

Superior Belt Tighteners for Crank and First Kicker Belts, with hollow self-oiling Journals; can be oiled while running.

All the Pulleys leather-covered, except those of largest diameter, which do not require it. The MONARCH has more pulleys covered with leather than any other machine built. The covers are put on under heavy roller pressure, and stretched so tightly, that, to all intents, they form a part of the rims of the pulleys.

Splendid manner of Belting; the belts throughout being of extra width and length, which in running over the large pulleys the MONARCH is fitted with, give increased and abundant driving power, without undue strain on them.

Shafts having two belt pulleys on same end, have the driving belts drawing in contrary directions, thus saving extra wear on the journals.

All principal Shafts made of Steel, as follows: Cylinder Shaft, Crank Shaft for driving the decks, First Kicker Shaft, Second Kicker Shaft, and Fan Shaft.

Seed Screen in Shoe, which can be removed when not desired to be used.

Tool Box, which slides in a case in the form of a drawer; hung in a convenient place where free from litter, and can be drawn out from either side of the machine.

Height of Machine from the floor to the top of the decking, when on trucks, is only 6 feet 9 inches. Every working part is thus within easy access.

The Truck Wheels of the MONARCH are of large diameter, the forward wheels being larger than the hind wheels of any other Separators built in Canada.

Superior quality of Material. In addition to the different steel shafts already enumerated, with which the MONARCH is fitted, it is furnished with steel lifting fingers for the decks, and steel pitmans and springs for the shoe. Malleable iron is also largely used in its construction, which we venture to say is not used at all in the majority of other makes of machines. We use only the best grades of leather and rubber belting, and in short, only the best materials are used throughout.

The Painting, Finish and Ornamentation are not equalled by any other on the market. Each machine is given three coats of superior lead paint, in striking contrast with the glue sizing and single coat of inferior paint with which some other machines are finished. It is then handsomely decorated and finished, as the photo-engravings on previous pages fully show. In addition to the better preservation of the woodwork by good painting, we have always considered that a threshing machine is an article of sufficient value to entitle it to being nicely finished.

Extras. With each machine we furnish a very complete supply of extras, including Wrenches, Cold Chisel, extra Cylinder and Concave Teeth, Belt Punch, Oil Can, Extra Concave filled with teeth, Round Wooden Measures (inspected and stamped), etc.

From the foregoing description of the many features of merit embraced in our MONARCH, it must be admitted that it is a superior machine, and we are confident that intending purchasers, after comparing it with others, will decide in its favor. We have not overstated a single claim made for it. In fact, the perusal of the recommendations which are contained in this catalogue will show that more could, without exaggeration, be said in praise of it. For simplicity, durability, convenience, lightness of draft, fast threshing, and perfection of work, it stands without a rival, and a careful consideration of the merits claimed for it is requested of all interested.

SUNDRY ATTACHMENTS AND EXTRAS.

CLOVER HULLING ATTACHMENT.

We are prepared to furnish all who may desire it, a **Clover Hulling Attachment,** which can readily be attached to any of our Separators. This Attachment has been in successful use for a number of years, and is highly commended by those who have operated it and hulled and cleaned clover seeds with our machines. Our customers are emphatic in their statements that they do just as good work with it as can be done by any regular clover huller, while it is generally conceded that the Attachment can accomplish the greatest amount of work in the same time. It is furnished complete, with sieve, and is quickly and easily fitted into the machine. In sections where clover is grown to any extent, we are sure that the thresherman will find the extra cost for our hulling attachment to be the best paying investment he could possibly make. It is an extra, and is supplied only when ordered.

BARLEY BEARDER.

Our Barley Bearder has been used for a number of years past, and is constantly growing in favor with farmers and threshermen. It has been thoroughly tested, and has given the best of satisfaction. Under the Grain Conveyor is placed an Elevator, which elevates the grain to the bearder fastened beneath the forward sills of the separator. The elevator is fitted with link chain belting, to which hardwood blocks are attached, thus making the elevation positive, and preventing all possibility of clogging. The upper elevator boxes are made adjustable, whereby any slackness of the chain can be easily and readily taken up. The bearder consists of a perforated sheet iron tube, in the ends of which cast iron heads are bolted. The heads are provided with babbitted boxes made in two parts in order that the wear can be taken up. The bearder shaft is of 1¼ inch round steel, on which are fitted pressed wrought-iron flights or sections. For better support, the pulley end of bearder shaft, which extends slightly beyond the sill, is provided with a cast-iron bracket. It is driven by belt from the cylinder shaft, and revolves at the same speed as the cylinder. Beneath the bearder, and at the opposite end of it to the elevator, is attached a reversible spout, by which the grain is discharged into the measures, on either side of the machine, as desired. A further and better knowledge of it may be gained by reference to the cut on page 12. From the above description it will be seen that our Barley Bearder is built in a superior manner, and also that all grain passing through it is **uniformly** stirred up and thoroughly bearded. At the same time the beards are not taken off close enough to injure the berry. The appearance of the barley is also improved, and thus made more marketable, generally commanding a better price as well. Although, to make our bearder more convenient and satisfactory in working, it is provided with an elevator, it is offered at a lower price than some other and more unhandy bearders made without elevators. We fully guarantee it to give entire satisfaction. It is also an extra; is furnished only when ordered, and in all cases purchasers will be charged extra for it.

PEA THRESHING ATTACHMENT.

This Attachment is intended for use only in sections where the large, tender varieties of peas are grown, and is not generally required for threshing ordinary peas, for which the usual concaves answer satisfactorily. It consists of a cast iron grate, to be used instead of the three ordinary rear concaves in machine, and adjustable twin pulleys of larger size, to fit on the cylinder shaft, for driving the separating decks and shoe, and maintaining the usual speed of these parts, while the cylinder is driven at about one-half its regular speed The grate is provided with ribs, extending crosswise of it (or lengthwise with the machine), and the twin pulleys are fastened to cylinder shaft by a set-screw, whereby the change can be made in the quickest possible manner. Only one of the two usual pulleys on end of cylinder shaft requires to be removed, as the inner twin pulley being hollow, fits over the pulley keyed on the shaft next to cylinder box. On account of the twin pulleys being larger than the ordinary cylinder pulleys, longer driving belts are required, and to save the time taken up in lacing pieces into the usual belts and again unlacing them, extra driving belts of full length should be ordered with the attachment.

COMBINED BAGGER AND TALLIER.

When specially ordered, we furnish a Combined Bagger and Tallier, same as we have been building for our machines used in Manitoba and the Northwest Territories, and which an occasional customer in other parts of the Dominion may wish to have attached to his machine. In sections where its use may be found advantageous, it will prove a great convenience, especially in fast threshing. It is illustrated on page 10, but by a late change made in the manner of attaching it to the machine (not shown in cut), it is now raised about eight inches above the ground, so that it can be carried on the machine without requiring to take it off when moving from place to place. It tallies accurately either the number of bushels or bags of grain threshed. There are no parts to get out of order, and it is made in the simplest and most durable form. It has capacity for handling all the grain that can be threshed by our machine, and the elevator being fitted with link chain belting it cannot clog up. **It can, with equal convenience, be attached to either side of the machine.** It is an independent attachment, same as the barley bearder and clover huller, and can be connected to any MONARCH machine built by us. With this bagger one man does all the bagging with the greatest ease.

REVOLVING GRAIN TALLIER.

In localities where threshing is done by the bushel, the need of a reliable and convenient tallier is still largely felt. It is a well known fact that no matter how reliable the person keeping tally with pegs or pencil may be, he is liable to make mistakes or forget to tally, which often causes dissatisfaction. In using our Tallier this is all avoided, and a settlement satisfactory both to the farmer and thresher is assured. The following are some of its advantages:—1st. It always gives a fair count, and thereby protects both thresher and farmer. 2nd. The counting arrangement is all under lock and key, which prevents interference by meddlesome persons. 3rd. The farmer can do his own measuring, and the thresher is satisfied that the count is correct. 4th. It revolves and counts the same whether moved backward or forward, and the filled measure cannot be taken from under the spout and the empty measure put in place without tallying. 5th. It is arranged to hold three measures, but two can be used as well when preferred. 6th. Either half or full bushel measures can be used with it. 7th. The base on which the measures set is of open frame work; no close floor or box used to allow of grain piling up and obstructing the measures. 8th. It can be placed partly under the separator, so that the measures will revolve under the sills, and does not thus take up any extra floor space, or project beyond the truck wheels. 9th. It can be used with any threshing machine, the sills of which are not less than fifteen inches above the floor, when our measures are used with it. 10th. It is simple and strong. The tallying arrangement has but two wheels and two springs, which makes it reliable in counting, and not easy to get out of order.

It is the most reliable, cheapest and best finished Tallier in the market.

DUST COLLECTOR.

The Dust Collector consists of a small enclosed fan, attached to the top of the separator, immediately back of the cylinder, and is driven from the cylinder shaft. By means of it the dust is taken out of the body of machine as fast as made, and forced through a long canvas tube out of the barn, regardless of the wind. The tube may be run out at either side of the barn, as the Collector has two outlets, one being closed when the other is in use. For out-door threshing the tube may be turned in any direction so the dust will go with the wind. Thus the men are saved from the disagreeable effects of the dust, the straw cleaned, and the usual accumulation of dust on the hay and all through the barn prevented. No progressive thresherman should think of continuing the business without the Dust Collector. This attachment has now been in successful use on threshing machines for some years, throughout the United States and in some parts of Canada, and is highly spoken of by those who have used it. It is easily attached to any threshing machine by any thresherman. It is furnished only when ordered, and the price of it is in all cases extra. Price and special circular of the Dust Collector will be furnished on request.

OUR PITTS' IMPROVED HORSE POWER.

Our Pitts' Power has recently been further greatly improved and strengthened. We build it either "Down" or "Mounted." The cut below represents our Pitts' Power mounted on trucks.

This power is esteemed by threshermen as the STRONGEST and MOST CONVENIENT Power in use.

It is simple in construction; very durable; easily adjusted; easily repaired and kept in order; sets firmly when running, and is of extremely light draft.

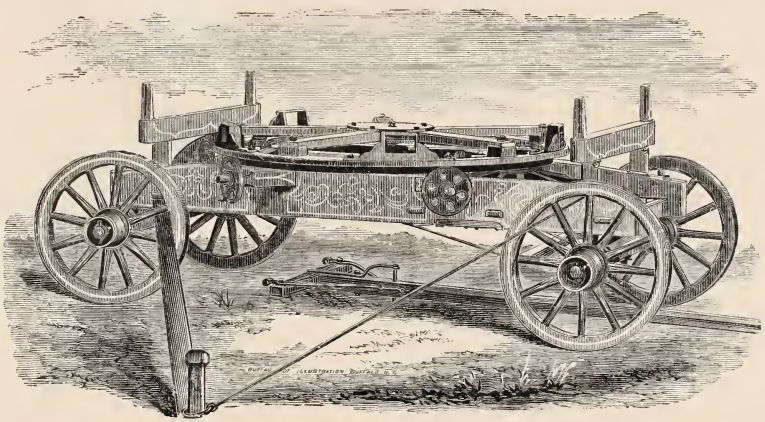
The Master Wheel is LARGER AND HEAVIER than usual, and with more cogs, GIVING INCREASED SPEED, while from the manner in which the levers and braces are fitted on, THE DRAFT IS GREATLY LESSENED.

The Line Shaft Boxes are babbitted, causing greater smoothness in running, and increasing their durability.

The rims of the Bevel Wheels are turned, which causes them to run smoothly under the travellers, thereby materially decreasing friction and preventing that unpleasant jarring so common to other Powers.

The Travellers over the Bevel Wheels are much larger than are usually made, by which the motion at the hub is decreased, and the wear of the traveller and pin greatly lessened. The hub has been made correspondingly wider, giving ample bearing for steady running.

All our Powers are fitted with Bevel Wheel Pins made of the BEST QUALITY OF STEEL.



PITTS' MOUNTED HORSE POWER
Staked Down and Ready for the Levers.

The Bevel Wheel Caps and Steps ABOVE and BELOW the upright pins are fitted with set-screws, whereby the gearing can be adjusted to any desired nicety.

The Centre Plate castings extend out under the wooden centre arms of the Master Wheel, thus greatly supporting the Master Wheel, and reducing the draft.

THE MASTER WHEEL COGS ARE OF AN IMPROVED PATTERN, combining GRFATER STRENGTH with ease of running than are to be found in any other.

The boxes in which the outer ends of the centre arms are fitted are CAST SOLID ON THE MASTER WHEEL, thus aiding in preventing the Power from getting "off the centre" and the gearing out of line. The frame is wholly made of selected oak timber, and smoothly finished.

The convenient arrangement of the various parts, whereby they can be easily inspected and looked after, and are thus not liable to be neglected, is another very favorable feature of this Power.

From the foregoing description of its principles and construction, the DURABILITY AND EASE OF DRAFT of our Power are beyond question, and it is specially constructed throughout with a view to these ends.

In its construction we use only the best brands of iron, so as to make the strongest and most durable castings, as we are determined to maintain the reputation of building the best and most durable Pitts' Horse Power in the Dominion.

MOUNTED POWERS.

The popularity of our "Mounted" Powers has become so marked, that in the great majority of cases they are ordered in preference to "Down" Powers. Beside the advantages enumerated below, they save a great deal of time and hard lifting and all who have used them are so well satisfied that they could not be induced to run a Power in any other way.

The advantages we claim for our "Mounted" Power over any "Down" Power are:

1. It being on wheels and being provided with bolsters for carrying levers, etc., it is always ready to hitch to and drive off, or stake down, as the case may be.

2. It is staked quicker, firmer and more easily than any "Down" Power, and saves all the heavy and unpleasant work of loading and unloading that has to be done with a "Down" Power.

3. When done threshing, five minutes' work in taking off levers and taking up stakes, and all is ready for hitching on the horses and driving off; no lifting to be done.

4. When this "Mounted" Power is staked in position, the height of the levers is exactly right for the draft of the horses to come square on the gearing, thus preventing the lifting of the master-wheel when the horses pull suddenly or hard.

5. The gearing of the Power being raised from the ground, the dust does not affect the wheels and journals, as is the case with a "Down" Power.

6. No stakes being driven near the frame, as is required with a "Down" Power, the wood work is saved from being battered and bruised, and is kept in a much better state of preservation.

7. The levers, tumbling rods, straw carriers, etc., can be loaded on the Power, in moving from one job to another, thereby saving the expense of an extra wagon.

We warrant every Power, and every part thereof, to be perfect and free from flaws; and should any castings fail through being defective, they will be replaced free of charge, at our works, upon delivery of the broken parts to us.

We manufacture the Pitts' Power, either "Down" or "Mounted," for 10 or 12 horses.

SAFETY COUPLINGS.

Our Safety Coupling is the most successful made. No accident has ever resulted from its use, although we have sold thousands of them since first made by us.

The ring is in two parts, having recesses on the inside. Into these recesses are fitted hardwood blocks, soaked in oil, for the journals of the slip couplings to work against. Thus **no parts of the irons are wearing against each other,** the only wear being on the wooden blocks. The two parts of the ring are held together by rivets, **no bolts whatever being used about any part of the Coupling.** The wooden blocks, if oiling is not neglected, will long withstand the wear, but when they are worn out and require to be replaced, all that is necessary is to take apart the ring, insert new blocks, and the coupling is again as good as new.

The blocks are so simple that they can be quickly made by any person and are the only parts of the coupling on which there is wear. **No new castings or other parts are needed to renew the coupling.**

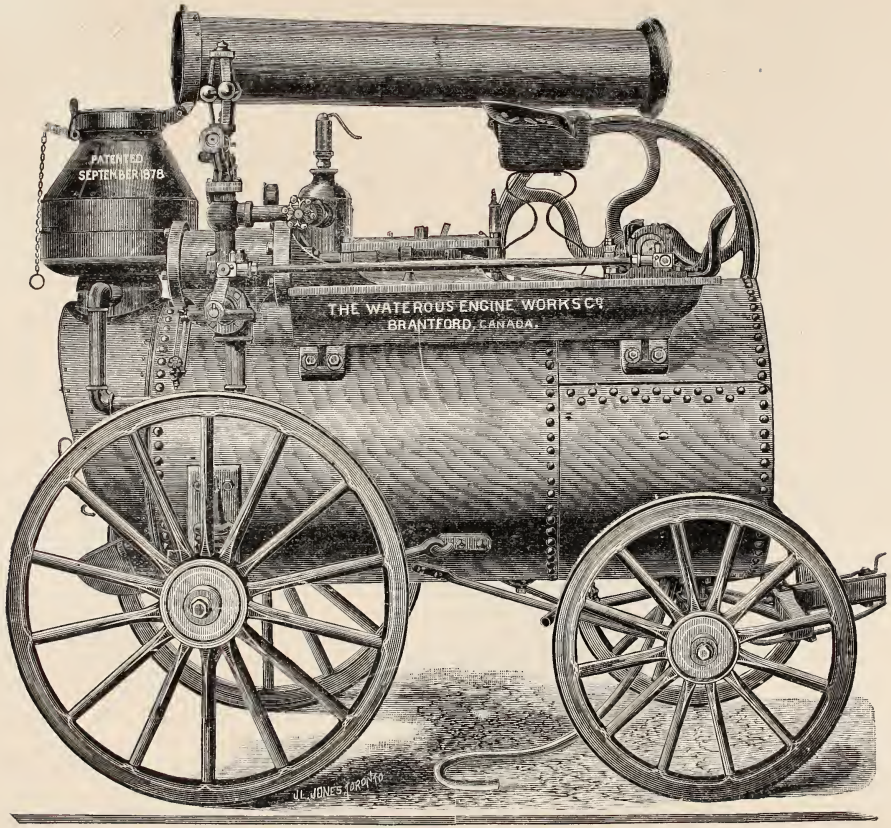
It does not HEAT, and sand cannot get in to cut it away. The outside surface being smooth and no bolts used in the coupling, there is no danger of getting the clothing caught. Being complete in itself, and ALWAYS COUPLED, it is only necessary to insert the rods into them.

These couplings can be used for any machine. It is only necessary to have the old rods squared up to fit. They are stronger and more durable, as well as **safer than any other coupling** in use.

EQUALIZERS.

The Equalizers manufactured by us are simple and very substantial. They are adapted for either "Mounted" or "Down" Powers. We do not furnish them except when specially ordered, as the Powers are complete and the levers ready to hitch to without them. We, however, advise intending purchasers of Horse Powers to also buy the Equalizers, as they are easier for the horses, each team having to draw their portion; and also the separator will do better work from the steady motion it gives The chains of the Equalizers work through pulleys set on top of the levers. The pulleys are readily attached to the levers without cutting them, only requiring holes to be bored for the bolts.

The Equalizers divide the strain on all the levers, and connect all the horses together, so that when one span of horses makes sudden pulls or starts it draws on the other horses instead of on the Power. They also make it much easier on the levers, and show at all times which horses are lagging.



THE HORIZONTAL CHAMPION ENGINE. RIGHT-HAND VIEW.

THE HORIZONTAL CHAMPION ENGINE.

With Self-Contained, Return Tubular Boiler.

WATER SPACE ENTIRELY SURROUNDS FIRE.

ONLY BOILER IN WHICH LONG WOOD CAN BE USED.

ALL HEAT UTILIZED BY RETURN TUBES.

ROUND FIRE-BOX. EASILY FIRED.

The cut on opposite page so fully illustrates the Horizontal Champion Engine that only a brief description of it is necessary.

The Boiler is of the Return Tubular Fire-box pattern, with water back and large combustion chamber, the fire box taking long wood, while the front is protected by a large projecting hood to prevent coals falling from the door when opened.

The Spark Arrester is the same as used on the old Standard Champion, but lighter, and so arranged as to give a direct draft when getting up steam, which is a great saving of time.

A DOME of ample size and good proportions is placed on the boiler, from which steam is taken to the engine, ensuring dry steam.

The Mountings are very complete and of the latest pattern; has also a fusible plug to prevent explosions by low water.

The Engine itself is by far the best in design and construction of any of its class placed on the market to-day. Being built with ground joints, no trouble is ever experienced from rubber blowing out, or delay caused by repacking. All glands, stuffing boxes, etc., are of brass, with steel pistons and stems.

The Cylinder is of new design, the steam chest being immediately below the cylinder, by means of which all water runs freely from the parts by gravity, a great point in actual working, ensuring absolute safety from frost.

A Throttle Valve is now also provided on same side of boiler as the fly-wheel, enabling the engineer to have instant control of the engine while starting and putting on main driving belt. In this respect the Champion has an advantage over some others of the same class of engines.

The Main Shaft has three bearings thoroughly braced and adjustable to wear, and is made of Low Moor iron.

The well-known Pickering Spring Governor is used to control the speed, and has all the latest improved connections. To sum up its merits, we will simply say that for safety, workmanship and material used, it is equal to the old Standard Champion;—that being the case, no higher recommendation can be given it.

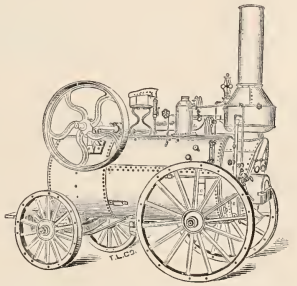
Two sizes specially manufactured for threshing purposes, of 12 and 16 horse power.

We are agents for the Champion Engine, and are prepared to offer it at same prices and on equally as favorable terms as the manufacturers.

Intending purchasers will obtain special advantages in ordering it from us in connection with our Steam Separators.

Write us for separate Illustrated Descriptive Catalogue giving full description of the Champion Engine.

WE CAN ALSO FURNISH ANY OF THE OTHER LEADING MAKES OF THRESHING ENGINES AT MANUFACTURERS' PRICES.

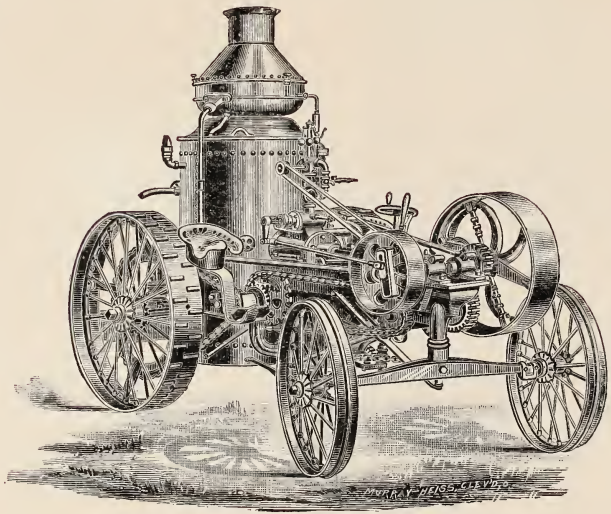


HORIZONTAL CHAMPION ENGINE.
Left-Hand View.

THE CHAMPION FRICTION CLUTCH TRACTION ENGINE.

UNEQUALLED BY ANY
TRACTION ENGINE BUILT IN CANADA.

ONLY BOILER SUITABLE AND SAFE
FOR A TRACTION ENGINE
THAT HAS TO
ASCEND AND DESCEND STEEP HILLS.



FIRE PROOF.
SAFE FROM EXPLOSION.
AS EASILY GUIDED AND HANDLED
AS A TEAM,
AND SAFER IN DANGEROUS PLACES.
COSTS NOTHING TO KEEP WHILE IDLE.

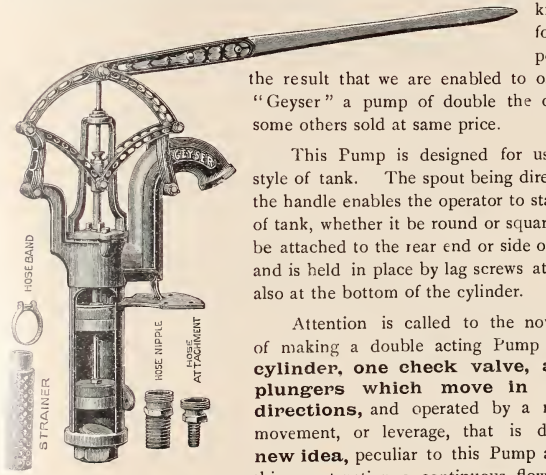
This Engine is constructed from entirely new patterns. Having an increased bearing surface on the boiler, and having strong wrought-iron side braces, the tendency to shake when going over rough roads is entirely obviated.

The Traction is driven by a FRICTION working inside of driving pulley, and transmitted by a pair of spur gears to counter shaft, and to the wheels by the patent detachable chain. Can be instantly thrown out of and into gear while the ENGINE IS IN MOTION. This engine is provided with a new reversible eccentric, which is operated by a lever, convenient to the hand of the engineer, who also has control of the lever throwing the traction in and out of gear, and of the Steering Wheel, enabling him to guide the engine at pleasure; the reverse lever, friction lever and steering gear, being under the hand and entire control of the engineer, he can take the engine up and down heavy grades with entire safety. The driving wheels have broad tires and are provided with extra CREEPERS, which may be bolted on for muddy roads, etc. It is provided with every requisite for a first-class Road Engine, and is the neatest and handiest Traction Engine in the market. This engine is emphatically the Traction brought to perfection. Years of experience have revealed numerous defects in this class of machinery, and to remedy the faults has cost labor, time and money. A want has therefore been filled in supplying a Friction Traction so combined as to make it effective and durable.

THE "GEYSER" TANK PUMP.

Capacity—Two Barrels per Minute.

The accompanying cut represents the "Geyser" Tank Force Pump, which is specially designed for filling Thresher Tanks, and which we recommend to threshermen as a Tank Pump of extra large capacity, and the best made and finished of any yet produced. The growing demand for a suitable and moderate priced Pump for filling tanks led us to investigate carefully the merits of different kinds made for this purpose, with the result that we are enabled to offer in the "Geyser" a pump of double the capacity of some others sold at same price.



This Pump is designed for use on any style of tank. The spout being directly under the handle enables the operator to stand on top of tank, whether it be round or square. It can be attached to the rear end or side of the tank, and is held in place by lag screws at base and also at the bottom of the cylinder.

Attention is called to the novel feature of making a double acting Pump with **one cylinder, one check valve, and two plungers which move in opposite directions,** and operated by a mechanical movement, or leverage, that is distinctly a **new idea,** peculiar to this Pump alone. By this construction a continuous flow of water, great capacity, and ease of operation are obtained. It is equal to two single-acting pumps with same size cylinder and stroke.

It has a 5-inch cylinder, bored and polished, and all openings are from 2 inches to 2½ inches in diameter. By removing top cap all working parts can be withdrawn. It is fitted with Drip Cock to drain cylinder.

Capacity, 2 barrels per minute.

It has powerful force, throwing water to a distance of 60 to 75 feet from point of nozzle.

Either suction hose or pipe can be easily attached.

It works easily, and owing to the simplicity of its construction is not liable to get out of order.

It can be used as a Spray Pump, or to put out fires; for washing out boilers; draining cellars; washing wagons; irrigation purposes, and is useful in many other ways and places where handling large quantities of water is required.

Prices and special circulars of this Pump will be furnished on application.

MAIN DRIVE BELTS.

Much deception has been practiced by some dealers in connection with Rubber Drive Belts, in supplying inferior grades on the representation of their being of best quality, and on which, to more readily sell them, vague guarantees have been given, resulting in almost every instance in disappointment, annoyance and loss to the threshermen who purchased them. Especially has this been the case with endless belts, in which the deception cannot readily be detected without cutting open, and thus destroying the belt. This has been done to so great an extent that we have decided to keep on hand only the best grades made, and of which we, at all times, have a large stock. We especially recommend, to those desiring a superior and strictly first-class belt in every respect, a "SEAMLESS" Rubber Belt, which is specially manufactured for us, of the best grade of rubber, and is fully guaranteed by the makers to be perfect in manufacture. As all threshermen are aware, the seam is the weakest part in rubber belting as usually made, which in our "SEAMLESS" is done away with. We will be pleased to forward samples on application. We offer these belts at close prices, and although the first cost of them is somewhat higher than ordinary belts, they are the cheapest in the long run. It is poor economy to buy a poor belt.

WE ARE ALSO PREPARED TO FURNISH, ON SHORTEST NOTICE, SOLID COTTON, STITCHED CANVAS, AND ALL OTHER KINDS OF DRIVE BELTS, AT LOWEST PRICES.

SUNDRY INFORMATION.

EVERY MACHINE TESTED.

Every machine when finished, and before it is run into the paint shop, is run at full threshing speed, and the cylinder, shafting, boxes and all other working parts carefully and thoroughly examined. If anything is found imperfect in any way the defect is at once remedied.

The testing of machines before going into the hands of threshers we have found to be of the greatest importance and advantage. Greater care is taken by workmen in building, in knowing that any carelessness on their part will be discovered when the machine is tested. Every thresherman is also aware of the necessity of every part of the machine working well, without hitch or difficulty of any kind when first started, and the great injury and loss that is often caused when anything occurs to prevent it starting off well. The assurance the thresherman has of getting a tested machine, which is as certain of working as well the first day started as at any time afterwards, will therefore be fully appreciated.

WARRANTY.

Every purchaser of one of our machines, who signs one of our agreements, is fully protected in that agreement, as a warranty with ample stipulations as to the superior capacity and quality of all kinds of work of the machine purchased, its durability with proper care, and providing for replacing, free of charge, any parts which may fail by reason of defects, is given.

REPAIRS.

All orders for repairs receive our immediate attention. The Canadian Pacific and Great North-Western Telegraph Companies, and Bell Telephone Company, have offices here, which, with the express trains leaving almost hourly throughout the day, is abundant assurance to our customers that their orders for repairs will be received and filled by us in the promptest manner.

PRICES AND TERMS

Will be found in our COMPLETE PRICE LISTS, which, together with any furthe information desired, will be promptly furnished by addressing us.

AGENTS WANTED.

We want good, reliable, energetic agents in every part of the Dominion, where we are not already represented, and to such are prepared to offer favorable terms. Send for our Circular of Instructions to Agents, terms, price lists, etc.

SPECIAL NOTICE.

Purchasers will please take notice that we do not hold ourselves responsible or accountable for any money paid to, or collected by, any of our agents, unless said agent has been duly empowered by us to collect and receive the same; and any agent, or other person, who acts in this capacity for us will be furnished with the proper authority. Bear in mind, this does not prevent or apply to the giving of orders or promissory notes to our agents when sales of our Threshing Machines or other implements are made. All orders received through our agents will receive prompt and careful attention.

HOW TO OBTAIN OUR MACHINERY.

If we have no Agent near you, write us direct, when we will write you giving full information how to obtain our Machinery. Full particulars will be given in answer to letters.

Communications which require attention from our Travelling Agents will be forwarded to them by mail or telegraph, as the urgency of the case demands.

Our Works and General Business Office are at Clinton, Ontario, ONLY. All correspondence should therefore be addressed to

MACPHERSON & HOVEY CO.,
CLINTON, ONTARIO.

TESTIMONIALS

The following letters, of recent date, are from those who have bought and are using Monarch Threshers, and fully verify the claims made by us as to the valuable features contained in this machine. For want of space we can publish but a few of the many testimonials voluntarily sent us, but what we do print are fair specimens, and clearly indicate the true merit of our machinery.

From GEORGE A. QUANTZ, Allandale, Simcoe Co., Ont.

The Monarch is the best machine made. We have threshed at the rate of 2500 bushels per day.

From LOT WEBB, Stroud, Simcoe Co., Ont.

I will now let you know how I like the new Monarch machine. It went off nicely and everybody was charmed. I am getting along well so far. The second day I threshed, my neighboring thresher's men came over to see the Monarch run. They tried her, and fed her, and were delighted. I believe my neighbor has since laid aside his —— machine and ordered a Monarch from you.

From N. D. & J. A. SCOTT, Hopeville, Grey Co , Ont.

The Monarch threshing machine we bought from you has given us good satisfaction, and everyone around here says it is the best separator they ever saw. One man told us that we threshed 240 bushels of oats for him in 40 minutes. We have threshed different times at the rate of five bushels of oats per minute. It is very substantially built, is a good thresher, and a first-class separator. The latter is a point we are very particular about. The truck wheels being very high, it is lighter to draw than other machines.

From ALEX. ARNOLD, Cookstown, Simcoe Co., Ont.

The Monarch Separator I purchased from you, as a thresher of all kinds of grain, has given first-class satisfaction both to my customers and myself. I must say it has the best bearings and boxes that I have ever seen on any machine. The boxes are wide and well capped to prevent dust, as all machines should be. I am sure it will be a durable machine, and it runs smooth Your pulleys are also superior to those on most machines, being large and wide. The Monarch, in my opinion, has the best separation of the grain from the straw of any machine that is built to-day.

From ELI DICKSON, Central Onslow, Nova Scotia.

As I have now had two season's use of the Monarch Separator, I desire to express my perfect satisfaction with its working qualities. I have had a great deal to do with threshing machines during the past ten years, but never had what I considered a complete, good-working machine until I got hold of the Monarch. Strength, capacity, durability and lightness of draft are all to be found in this machine. It has an excellent cylinder, so constructed that it never winds in long, heavy straw, as we have down here by the sea. The concaves are easily adjusted, to suit all kinds of grain, without stopping. The capacity also that the decks and sieves have for taking care of the straw and grain after leaving the cylinder is grand. I know of no other thresher that can clean the grain equal to the Monarch. It would not be doing justice to the Monarch if I were to compare its best day's work here, with what almost any other machine can do in Ontario, or in any inland country, as the grain is so much more easily threshed there than it is with us, but I have turned out three bushels a minute on several occasions. After running two seasons the machine is in good repair, and has not cost me five cents for repairs, with the exception of a few cylinder teeth. I may say that all the farmers I have worked for tell me you have got the right article in the Monarch.

From JOHN ROLSTON, Picton, Prince Edward Co., Ont.

I thought it my duty to let you know how I like the Monarch Separator which I bought from you. I like the machine very well. It cannot be beaten for threshing peas.

From THOMAS HINDS, Allenford, Bruce Co., Ont.

The Monarch Separator I purchased of your agent, Mr. James Dean, gives me good satisfaction, and I am highly pleased with it. I can recommend it to any intending purchaser. It runs very easy and is strong and durable. It has the best trucks made I threshed with it this season 3000 bushels of oats in seven hours, and wheat at the rate of four bushels a minute.

From NEWMAN GARBUTT, Summerville, Peel Co., Ont.

The Monarch Machine I purchased from you is a complete rig, and works well. I am well suited with the working of the kickers, which separate the grain from the straw well. The shoe works like a charm ; never blocks up, and its cleaning qualities are superior to any I have ever seen. The cylinder is complete in the way it is arranged. The leather covered pulleys are a great thing, and the trucks are the best I have seen yet The Monarch is built strong and durable, and ought to last a long time. In fact, it is without a fault.

From EMANUEL A. DAVIS, Picton, Prince Edward Co., Ont.

The Monarch Separator, which I purchased from you, is the best separator in this part of the country for doing good and fast work and being handy to operate. It threshes the grain clean from the straw, is perfect in separation, and cleans the grain in good form. I like your Monarch machine in every respect. The construction of the cylinder is A1, and the means of adjusting it endwise ahead of anything I ever used or saw on a cylinder. The reversible teeth are a great saving, and work well. It is the most perfect belted of any machine I ever used, and, without any exception, it has the best pea attachment there is in this part of the country. I have threshed peas that went on the market from the machine without any further cleaning I can say I think the Monarch has no equal It did not cost me one dollar for repairs throughout the season, and is now in good order for starting out another season, needing nothing worth mentioning beside some new teeth.

From F. W. E. TOTTENHAM, Hoath Head, Grey Co., Ont.

I can say that your Monarch is the best separator I ever ran. I previously ran a P——s for two years, but did not like her as she was a very dirty thresher. The Monarch is well named. It has the best cylinder I ever saw. The decks, kicker forks, shoe and everything work so nicely that it is a pleasure to run her. She never gave me any bother all season ; runs still and stands solid on the floor. It is a machine that after being paid for is still able to earn a good sum of money for the owner, and not like some others that are then so worn out the farmers are looking for a new machine. I never broke a tooth, and don't believe you could, for they will bend right down on the bar without breaking. There is not a man I threshed for that doesn't say it is the best machine that was ever in his barn. As to big work, we threshed for Mr. Hoath 2700 bushels of oats, wheat and barley in twelve hours. It is the lightest machine I ever drove, being so because there are so few teeth in the cylinder. The ——— has nearly a hundred, where the Monarch has but 56, and that makes a great difference in the power required to drive her.

TESTIMONIALS

From FRANCIS R. SHERBINO, Glenvale, Frontenac Co., Ont.

The Monarch Separator I got from you has given great satisfaction to everyone we have worked for, and also to myself. It is all that you represented it to be. I do not think it can be beat for a pea thresher, or in any other kind of grain. If I was buying again I would have no other.

From DARIUS WILCOX and SON, Meaford, Grey Co., Ont.

The Monarch has, so far, given good satisfaction both to us and the farmers we threshed for. The machine is good for cleaning all kinds of grain. In peas it can't be beat, and for grass seed there is no machine like it. I cannot now give you a fair report of it, as we have not yet tried to crowd it for fast threshing. We did not get a good day's work on account of small crops, but when we get through with next fall's work I will then send you word of what we have been able to do.

From ALFRED LESPERANCE, Tecumseh, Essex Co., Ont.

The Monarch Separator I purchased from you last fall has given me entire satisfaction, and all the farmers for whom I threshed say it is the best machine ever employed by them. It is a perfect grain saver, and will save grass seed as well. Several old threshers have watched its working carefully, and have stated to me that it is the best machine and did the finest work they ever saw. I was especially pleased and surprised with the splendid manner in which it handled peas, and it is just as easy to feed them as bound grain. It will handle loose stuff equally as well if properly fed. This is on account of the improved and very superior cylinder with which the machine is fitted. I fully recommend the Monarch Separator as in my opinion the best machine now on the market.

From AARON BENEDICT, Frankford, Hastings Co., Ont.

I have not had time to see all the parties that I threshed for, but I have not threshed for any man who has not said I did the best and fastest work for him he ever had done. The Monarch machine can't be beat. I would just say that I have threshed with the new Monarch 140 bushels of wheat in 57 minutes, 133 bushels of barley in 54 minutes, and 157 bushels of oats in 50 minutes, and did not know they were timing me I give below the names of a few farmers I threshed for, and what they say of the work I did for them with the Monarch :

This is to certify that Aaron Benedict threshed for me with the new Monarch. Never had better work and faster.

J. Lynn.

This is to certify that Aaron Benedict threshed for me. Best job I ever had done.

H. Michel.

This is to certify that we helped thresh with the new Monarch. It is the best working machine we ever saw.

H. Wallace.
Thomas Fair.

Aaron Benedict threshed for me. He did the best job I ever had done. His machine is the best grain saver I ever saw.

H. Smith.

This is to certify that the new Monarch threshed for me. Am well pleased with the work. Am satisfied it can't be beat.

H. Pitcher.

From WILLIAM FULFORD, Heathcote, Grey Co., Ont.

Having finished a very successful season, without a single break or drawback of any kind, I think I can safely say that the Monarch is one of the best made and finished machines in Canada, and will thresh faster, and do its work better, than any machine I have seen. I can honestly recommend it to any person wishing to buy a machine.

From W. J. WALKER, Schomberg, York Co., Ont.

The Monarch Separator I bought of you has proved to be first-class in every respect. Our customers say she is a dandy. They want us back next year, as well as a good many others, which is proof of the satisfaction it has given. It is, in all respects, the best machine in all kinds of grain. The only trouble I have is to get enough men in the mow to pitch stuff as fast as will keep her from running away on me. There is nothing in the country can beat the Monarch for speedy threshing and good separation. Some days we have to make two moves on account of her large capacity. I do not fear anything—wind, dust, long straw or thistles, and can guarantee a good job.

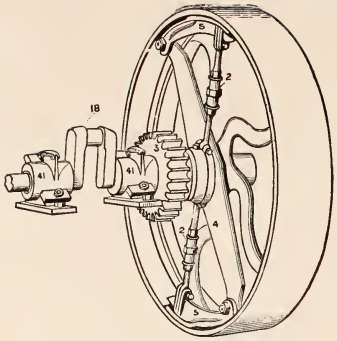
From STEPHEN O'CONNOR, Sand Point, Renfrew Co., Ont.

The Monarch we purchased this past season has given entire satisfaction in all kinds of grain. Crops were below the average here, but we got all we could do, and that was more than our share You will never see any fat fowls in the barn-yard where the Monarch threshes. It is the lightest of draft, strongest running, the most convenient to operate and set, and will do more work and do it properly than any machine I have yet handled or seen. Its separating apparatus, viz : the two decks, the steel lifting fingers and the kickers are models of perfection in themselves. The end-shake shoe, with the undershot blast never carries any grain more than two-thirds the length of the sieve till it falls to the bottom, on seed screen, which is also the largest and best I have yet seen. The stackers, stacker belts, and windlass, the mode of driving and the side delivery are second to none. The style of cylinder and position of concaves gives it more threshing capacity than any other machine, and for feeding, you would actually wonder where the great armfuls went to. There is no tearing up of the machine to adjust cylinder concavewise, as it can be done in a few minutes by means of the adjusting arm. The boxes, being fitted on pivots, will never heat, except for want of oil. The reversible cylinder teeth will last much longer than others. Owing to the large number of pulleys being leather covered the belts hold to them much better, consequently they run much slacker and do not heat the boxes, as is the fault with the belts on many other machines. When belts have to be kept so tight that they can't stand it, the laces or lace holes must go, or burn the belt. The Monarch runs so smooth, and it is so easy to keep it running so, that there is none of the pounding, jarring or pounding both sideways and endways which belong to other machines, consequently the boxing and shafting will always wear true, and not flat or oval as others will. The principal shafts being made of steel, and fitted with such fine, large boxes, they never heat or wear out. Though the Monarch is a large mill, it is easily handled on the road, on account of the large truck wheels. It can also be turned very short, and set very quickly. It is comparatively light for the amount of wear it will stand, as it is of good material all through, and will outlive any machine that ever came to these parts. I have always had to do the best work and fight against prejudice, or else go without. Fortunately (thanks to the Monarch and her manufacturers) I can get over it all now. I have not had a chance to know what it will do in one day, for it has never been tried to its fullest capacity, but we cleaned out two 30x40 barns in one day, and I saw it running off six bushels of oats a minute, and I am quite satisfied it could handle ten in the same time if the feeder could have got it. They all say it has only one fault—too hard on the men This may appear loud, but send any man that don't believe it to Lochwinnoch or Castleford. It has done positively no inferior work this season.

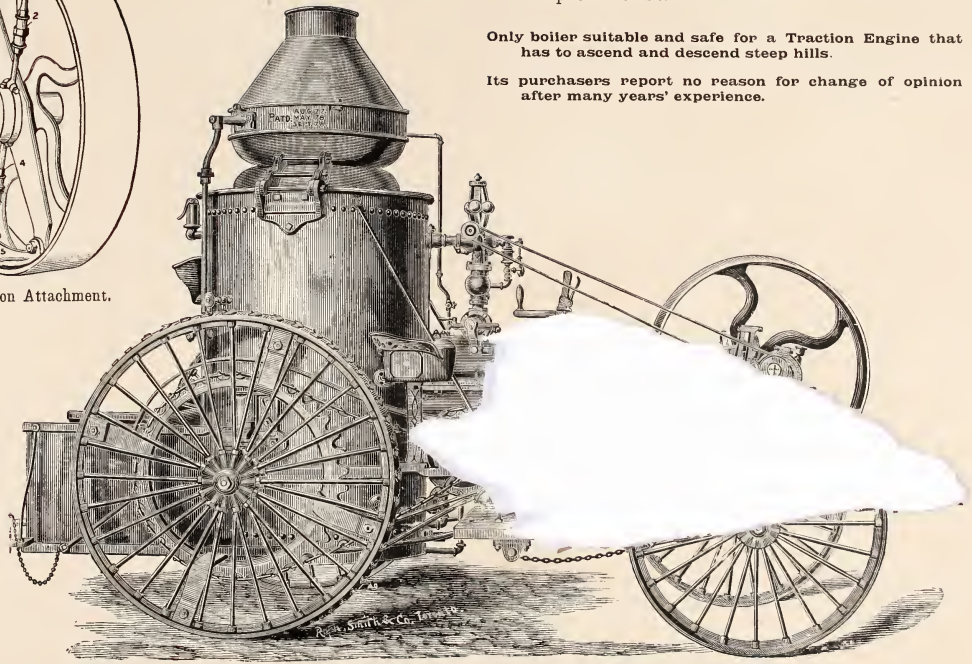
More easily guided and handled than a team; safer in dangerous places; and after threshing season is over costs nothing to keep it while idle.

Only boiler suitable and safe for a Traction Engine that has to ascend and descend steep hills.

Its purchasers report no reason for change of opinion after many years' experience.



Fly Wheel and Friction Attachment.



Recent improvements have been made in the link motion and friction connection to fly-wheel, not shown in engine cut. See separate cut above of fly-wheel and friction attachment.

THE CHAMPION TRACTION ENGINE.


the
rch"